DRAFT MEETING MINUTES

MEETING NAME: WISCONSIN ENTERPRISE ARCHITECTURE TEAM (WEAT)	
DATE: MARCH 2, 2004	
TIME: 10:00 A.M. TO 12:00 P. M.	
LOCATION: ADMINISTRATION BUILDING, CONFERENCE ROOM 8F	

WEAT Members:

- Group Leader/Chief Enterprise Architect – Ben Banks (a DET representative)
- Lead Technical Enterprise Architect – George Ross (a DET representative)
- Enterprise Architect – Keith Hazelton (UW representative)
- Enterprise Architect – Bud Borja (Milwaukee Co., local government representative)
- Enterprise Architect – Jay Jaeger (DOT, large state agency representative)
- Enterprise Architect – Judy Heil (DATCP, small state agency representative)

DET Support Staff: Patricia Carlson

Agenda Items:

(1) Review of 2-24-04 Meeting Minutes – Patricia Carlson (10 Minutes)

(2) Enterprise Architecture Update – Ben Banks (15 Minutes)

(3) Review of WEAT Charter Draft – Ben Banks (30 Minutes)

(4) Review of WEAT Principles Draft – Ben Banks (30 Minutes)

(5) Overview of the Zachman Framework – George Ross (20 Minutes)

(6) Assignments for next week and meeting wrap-up – Ben Banks (10 minutes)

Note: Agenda Item - Overview of the Zachman Framework was delayed until the 3-9-2004 meeting.

Enterprise Architecture Update – Ben Banks

There was a general discussion regarding the email comments to the draft Charter and Principles documents. Most members of WEAT expressed that they were expecting to see more of an "outline format" for the draft documents, rather than documents that had the appearance of a finished document.

There was a proposal via email and some consensus among WEAT members that an outline format be used going forward for future documents, as this would provide the ability for WEAT members to agree/ disagree/ discuss to the general format of the document. It was proposed that this approach would provide the following benefits:

> (1) would be less time consuming for WEAT members to react to;
> (2) WEAT members could share the outline with represented agencies and gain their comments in a more proactive manner;
> (3) would reduce the amount of time spent by WEAT support staff in developing a document; and
> (4) would reduce the potential for "personal investment" into a particular document.

Additional comments were expressed that WEAT members expected to see a Principles document that reflected more of the approach from the State of Arizona. As in the initial meetings, Arizona was cited as a model example, something that Wisconsin may choose to emulate. A member of WEAT had proposed via email a different Principles document based upon the Arizona Principles and discussions within the previous WEAT meetings.

Ben emphasized to the members of WEAT, that the draft Charter and Principles documents, were just drafts even though there was "considerable language present" within the documents. Ben requested that when comments are provided, that alternatives are suggested rather than just stating what is agreed to or disagreed with in terms of the language present in the document.

Ben stated that the approach and direction he has received from the Chief Information Officer (CIO), is to use a 'best of breed[1]' approach to develop the EA. This approach represents the State's CIO's desire to utilize a pragmatic approach to the development an EA that will provide business and technical agility for the State of Wisconsin. Ben then cited what he intended to use as "best of breed' inputs into the development of an EA for the State of Wisconsin. Table One on page three outlines the source of the EA document and what Wisconsin's EA effort would use from a particular EA source.

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[1] 'Best of Breed' is a strategy of selecting the best of a variety of solutions in this case a variety of completed EA documents, to create a final product, instead of developing a solution completely on your own. Appendix A on page 7, provides a description of various EA "framework" approaches that have been proposed in discussions between the CIO, CEA and Lead Technical Architect.

Table One "Best of Breed" Inputs

Source of EA Model	What WI's EA effort would use from an EA Source
State of Arizona	Methodology for scoring conceptual &technology solutions
Canadian Government	Criteria for selecting principles and the definition of a rationale and implication(s) defined for each principle.
State of Missouri	Emulate the format of the EA documents, specifically the Table of Contents.
Zachman Framework	Utilize this framework for the development of the Business Reference Model.

Ben then asked WEAT members to review the State of Missouri, Table of Contents Document. Ben stated that this is the approach that he would like to use to develop the deliverables for the State of Wisconsin EA[2].

As Ben progressed with a discussion of each of the items within the State of Missouri table of contents, there was discussion regarding:

(1) how does WEAT address current enterprise activities, such as server consolidation, that will be impacted by the EA?;

(2) a concern that there is a lack of an asset inventory or baseline information regarding the State of Wisconsin's IT environment;

(3) should the EA principles be at a higher level of abstraction? As this may allow the EA to address both short and long term needs of the State; and

(4) "the focus" portion of the State of Missouri EA – should the State of Wisconsin's EA Focus be static and at a higher level of abstraction, or be modified to reflect the change in priorities. A specific example of server consolidation was cited and discussed by WEAT members.

A question was raised regarding the sharing of draft documents with represented agencies (or in the case of the UW and Milwaukee County the sharing of the documents with represented peers.) There are two approaches to this issue: share the documents earlier or wait and share the documents when they are in a final draft format. While the majority of the WEAT team expressed that they would prefer to share the documents earlier[3], the decision was made that the documents would not be shared until they are in a final draft format. Ben agreed to raise the issues expressed within the discussion of sharing the documents to the CIO.

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[2] Note: Some members of WEAT expressed a general concern that the "deliverables" have yet to be clearly articulated.

[3] Note: Keith Hazelton cited the University's direct experience with the share / not share conundrum and that the University has selected and embraced an approach of sharing draft documents earlier rather than later.

There was discussion regarding the NASCIO Enterprise Architecture Tool Kit and that 14 (not 17) State's have used this tool kit to aid the development of their EA program. Background was provided to WEAT regarding the motivation for NASCIO to develop the EA Tool kit, namely this would assist States by providing a framework for EA development. Specifically, so that State's did not have to begin their EA efforts from "scratch" or a "blank slate". DET agreed to provide a comparison of the following items for WEAT by noon Thursday[4]:

  ➢ State.
  ➢ Link to EA Documents.
  ➢ Principles.
  ➢ Framework Used to Develop EA.

Discussion of Draft WEAT Charter Document – Ben Banks

Ben initiated a discussion of the WEAT draft charter document. The charter used the current IT Governance charter framework, specifically the charters developed for each of the technology domains.

A question was raised regarding the "WEAT virtual support team" cited in the charter. It is anticipated that this would be a Department of Administration (DOA) team representing the following disciplines: budget development / analysis, legislative development, capital finance, procurement, intergovernmental relations and other areas of DOA that can be used by WEAT to adapt current processes or recommend the development of new processes to support the implementation of an EA within the State's administrative framework.

As there was much concern expressed regarding the definition and prioritizing of the deliverables outlined within the charter. WEAT members suggested splitting the charter into two separate documents. The first document would be a prioritized list of deliverables and tasks necessary to develop the EA and the second would be the ongoing operational WEAT charter.

Members of WEAT felt that it was very important to have prioritized list of deliverables and tasks necessary to develop the EA developed immediately and that the operational charter could be developed at a later date.

An action item for the next WEAT meeting is to have prepared a prioritized list of deliverables and tasks necessary to develop the EA that can be shared with both the members of WEAT and the entities they represent.

Discussion of Draft Principles Document – Ben Banks

Discussion then shifted to a discussion of the Principles document. There was general agreement of the categories selected for the principles, which are:

  • Enterprise.
  • Management and Organization.
  • Technology.
  • Application Delivery.
  • User Interface.

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[4] Note: There is a difference in what was actually agreed to in the meeting and what DET provided to WEAT. This will need to be resolved, clarified.

- Security.
- System Management.
- Data Management.

The exact wording for each category has yet to be approved.[5]

It was recognized by WEAT that for each principle, there needed to be an identification of the scope of the principle. Specifically if the principle applied to Executive Branch Agencies or the Extended Enterprise - representing the University of Wisconsin, Local Units of Government and other Intergovernmental entities.

WEAT members representing University of Wisconsin, Local Units of Government will review the principles and make recommendations at the next WEAT meeting regarding which principles have an Executive Branch Agencies impact and which have an Extended Enterprise impact.

There was a discussion of each principle. In general it was agreed that to the extent possible, principles should be defined in more positive terms, rather than negative terms. An example of this was the modification of a principle from "compliance" to "convergence". In addition, the "words" used to state a principle, should be free from jargon. The example cited was a principle entitled "Business-Event Driven Systems". This principle was modified to use different language and clarify the intent of the principle. Within the listing of implications, both positive and negative ramifications need to be clearly articulate.

Other ideas, discussion items expressed by WEAT members regarding the principles included[6]:
- Creating a principle for "open standards".
- Changing 'proven standards' to 'pervasive standards".
- Discussion that for the EA to be successful, entities providing services, also need to provide consulting. WEAT members felt this was critical to the successful adoption of the EA and should be a principle.
- The concept of centers of excellence should be listed as a principle.
- Contract management or an approach to contracts should some how be articulate as a principle given the number of IT systems that are developed by external firms.
- "There was disagreement regarding both systems management principles and right sizing" was discussed as a systems management principle.
- A principle to promote the re-use or development of common systems was discussed.
- The extreme importance of data management was discussed. Specifically, that data management goes beyond defining and "authoritative source" for shared data.
- The fundamental question of "When does data become "managed" data?" was discussed.
- Developing "Chief Enterprise Architects" within agencies was discussed. This may be possible for some large agencies, but would extremely difficult for small agencies and local units of government.
- How to approach professional development for FTE's? There was general consensus that this was importance, but is technical excellence realistic? Would it be better to focus upon nurturing good project management skills?

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[5] Note: Appendix B on page 10 provides a listing and description of each of the EA categories.

[6] Note: Appendix B on page 10 provides a listing of the revised list of principles.

A question was raised as to how DET was managing and communicating WEAT's activities internally. Specifically, there was concern that the Bureau of Development and Operations is informed and has an opportunity to provide feedback regarding draft documents. Ben clarified for WEAT, that this is George Ross's role. And that George is responsible for communicating WEAT's activities within DET.

Action Items

DET
(1) Provide a comparison of the following items for WEAT by noon Thursday[7]:

- ➢ State
- ➢ Link to EA Documents
- ➢ Principles
- ➢ Framework Used to Develop EA

(2) Provide a revised list of principles to WEAT by end of business Friday. This document may be shared with represented entities.

(3) Provide WEAT University of Wisconsin member with links to Technology Leadership Council Governance Protocols and Sample Charters.

(4) Provide WEAT with prioritized list of deliverables and tasks necessary to develop the EA that can be shared with both the members of WEAT and the entities they represent at next week's WEAT meeting.

WEAT
(1) WEAT members representing University of Wisconsin, Local Units of Government will review the principles and make recommendations at the next WEAT meeting regarding which principles have an Executive Branch Agencies impact and which have an Extended Enterprise impact.

(2) WEAT University of Wisconsin member to provide DET with list of data and system management principles they developed.

(3) Review revised principle list, share with represented entities and bring suggestions, comments to the next WEAT meeting.

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[7] Note: There is a difference in what was actually agreed to in the meeting and what DET provided to WEAT, this will need to be resolved, clarified.

Appendix A – Description of Various EA Frameworks

NASCIO Enterprise Architecture Development Tool-Kit v2.0

The Tool-Kit document presents NASCIO's architectural framework for integrated information and data sharing between state and local governmental entities. The document contains sections addressing the business case for enterprise architecture, governance models that support implementation and management of the necessary architecture, an instruction set for developing or modifying enterprise architecture, templates for architecture design, samples provided by state and local governments with established architecture and an appendix containing a lexicon and descriptions of the NASCIO architecture framework disciplines.

NASCIO Enterprise Architecture Maturity Model

An adaptive, dynamic enterprise architecture enables the enterprise to change and manage the complexities inherent in large government enterprise. Enterprise architecture brings an operating discipline to the organization and prescribes the necessary traceability from strategic intent to the capabilities that enable that intent. These capabilities include both business and technology components. Enterprise architecture doesn't happen at once. It is an iterative, maturing discipline that provides management the operating discipline for organizing and engaging business and technology components to fulfill the mission of the organization. This maturity model provides a scale or metric for understanding where the organization is in its evolving discipline, and what steps are required to take it to the next level of maturity.

The NASCIO Enterprise Architecture Maturity Model provides a path for architecture and procedural improvements within an organization. As the architecture matures, predictability, process controls and effectiveness also increase. Development of the enterprise architecture is critical because it provides the rules and definition necessary for the integration of information and services at the design level across agency boundaries. Enterprise architecture includes business processes and representations, and supportive technology components. At its fullest maturity, enterprise architecture becomes an inter-enterprise concept and prescribes the infrastructure for inter-enterprise business processes and provides the design for allowing data to flow from agency to agency, just as water flows through the pipes and electricity flows through the wiring of a well planned home.

TOGAF, The Open Group Architecture Framework

TOGAF, The Open Group Architecture Framework, is an industry standard architecture framework that may be used freely by any organization wishing to develop an information systems architecture for use within that organization.

Using an architecture framework will speed up and simplify architecture development, ensure more complete coverage of the designed solution, and make certain that the architecture selected allows for future growth in response to the needs of the business.

Architecture design is a technically complex process, and the design of heterogeneous, multi-vendor architectures is particularly complex. TOGAF plays an important role in helping to "demystify" the architecture development process, enabling IT users to build genuinely open systems-based solutions to their business needs.

Why is this important? Those IT customers who do not invest in enterprise architecture typically find themselves pushed inexorably to single-supplier solutions in order to ensure an integrated solution. At that point, no matter how ostensibly "open" any single supplier's products may be in terms of adherence to standards, the customer will be unable to realize the potential benefits of truly heterogeneous, multi-vendor open systems.

There are four types of architecture that are commonly accepted as subsets of an overall Enterprise Architecture, all of which TOGAF is designed to support:

- business (or business process) architecture - this defines the business strategy, governance, organization, and key business processes;

- applications architecture - this kind of architecture provides a blueprint for the individual application systems to be deployed, their interactions, and their relationships to the core business processes of the organization;

- data architecture - this describes the structure of an organization's logical and physical data assets and data management resources; and

- technology architecture - this describes the software infrastructure intended to support the deployment of core, mission-critical applications. This type of software is sometimes referred to as "middleware".

TOGAF consists of three main parts:
1. The TOGAF Architecture Development Method (ADM), which explains how to derive an organization-specific enterprise architecture that addresses business requirements. The ADM provides:
   - reliable, proven way of developing the architecture;
   - architecture views which enable the architect to ensure that a complex set of requirements are adequately addressed;
   - linkages to practical case studies; and
   - guidelines on tools for architecture development .

2. The Enterprise Continuum, which is a "virtual repository" of all the architecture assets - models, patterns, architecture descriptions, etc. - that exist both within the enterprise and in the IT industry at large, which the enterprise considers itself to have available for the development of architectures. At relevant places throughout the TOGAF ADM, there are reminders to consider which architecture assets from the Enterprise Continuum the architect should use, if any. TOGAF itself provides two reference models for consideration for inclusion in an enterprise's own Enterprise Continuum:

   - The TOGAF Foundation Architecture -- an architecture of generic services and functions that provides a foundation on which specific architectures and architectural building blocks can be built. This Foundation Architecture in turn includes:
     - the TOGAF Technical Reference Model (TRM), which provides a model and taxonomy of generic platform services; and

- The TOGAF Standards Information Base (SIB), a database of open industry standards that can be used to define the particular services and other components of an enterprise-specific architecture

- The Integrated Information Infrastructure Reference Model, which is based on the TOGAF Foundation Architecture, and is specifically aimed at helping the design of architectures that enable and support the vision of "Boundaryless Information Flow".

3. The TOGAF Resource Base, which is a set of resources - guidelines, templates, background information, etc. - to help the architect in the use of the ADM.

Zachman Framework

The Zachman Framework was derived from analogous structures found in the disciplines of Architecture and Construction of buildings, and in Engineering and Manufacturing. It classifies and organizes design artifacts created over the process of designing and producing complex physical products (e.g., buildings or airplanes.) The utility of such a classification scheme is to enable focused concentration on selected aspects of an object without losing a sense of the contextual, or holistic, perspective.

In designing and building complex objects, there are simply too many details and relationships to consider simultaneously. However, at the same time, isolating single variables and making design decisions out of context results in sub-optimization with all its attendant costs and dissipation of energy.

The Zachman Framework as applied to Information Technology (IT) Architectures seeks to manage this complexity and permit focus on key aspects of design, construction, deployment and operations without loosing the broader context of the overall enterprise-wide IT perspective.

A balance between the holistic, contextual view and the pragmatic, implementation view can be facilitated by a framework with the characteristics of any good classification scheme that allows for abstractions intended to:
  - simplify for understanding and communication;

  - clearly focus on independent variables for analytical purposes, but at the same time; and

  - maintain a disciplined awareness of contextual relationships that are significant to preserve the integrity of the object.

It makes little difference whether the object is physical, like an airplane, or conceptual, like an enterprise. The challenges are the same. How do you design, build and change it piece-by-piece so that it achieves its purpose without dissipating its value and raising its cost by optimizing the pieces yet sub-optimizing the object?

The Zachman Framework is a six-by-six matrix of perspectives and focuses that contains 36 cells describing all aspects of any enterprise. Each row of the Zachman Framework as applied within the State of Wisconsin's Enterprise Architecture initiatives could be used to capture the

perspectives of different stakeholders in the Enterprise Architecture.

Appendix B – Architecture Principles

Proposed Architecture Principles

Architecture principles are a crucial foundation for the development of an Enterprise Architecture. In a sense, the architecture principles define the spirit of the Enterprise Architecture in that they are an attempt to capture the thinking behind it. Principles have a "timeless" quality because they define a value system. While methodologies frequently change, as a rule, values do not. The architecture principles have been grouped into related categories. Eight categories of architecture principles have been established, these are:

- Enterprise
  Enterprise principles constitute the rules, constraints and behaviors that an enterprise, such as the State of Wisconsin, will abide by in its daily activities over a long period of time. Enterprise principles are those principles, which are foundation to the development, implementation and maintenance of the Enterprise Architecture.

- Management and Organization
  Management and Organizations principles relate to how the State of Wisconsin engages its information technology resources to realize its goal of implementing an Enterprise Architecture. This includes planning, decision making, and executing information technology activities within the extended enterprise of Wisconsin State Government.

- Technology
  Technologies are tools or tool systems by which we transform parts of our environment and extend our human capabilities (Tornatzky and Fleischer 1990).

- Application Delivery
  Application delivery principles defines how applications are designed and delivered; how they cooperate, promotes common presentation standards to facilitate rapid training and implementation of new applications and functions. Good application delivery enables a high level of system integration, reuse of components and rapid deployment of applications in response to changing business requirements.

- User Interface
  In information technology, the user interface can arguably include the total "user experience," which may include the aesthetic appearance of the device, response time, and the content that is presented to the user within the context of the user interface. User interface principles must address:
    Equitable Use: Accommodating all users in relation to electronic networks. This means that delivery of services must occur simultaneously for all accessibility needs.
    Flexibility of Use: While promoting a degree of standardization and compatibility with various electronic information technologies, accommodating a wide range of individual preferences and abilities.
    Simple and Intuitive Use: Ensuring ease of comprehension and use, regardless of the user's experience, knowledge, language skills, or concentration level.
    Perceptible Information: Communicating information effectively, regardless of the user's physical and/or sensory abilities, so that it can be used efficiently and comfortably with a minimum of fatigue.

- Security
  Security encompasses all of the safeguards in an information system, including hardware, software, personnel policies, information practice policies, disaster preparedness, and the oversight of all these areas. The purpose of security is to protect both the system and the information it contains from unauthorized external access and from internal misuse. Security must be balanced against the need for access and the rights of citizens to privacy.

- System Management
  Systems management is the management of the information technology systems in an enterprise. This includes purchasing of equipment and software, distributing it to where it is to be used, configuring it, maintaining it with enhancement and service updates, setting up problem-handling processes, and determining whether objectives are being met.

- Data Management
  Data management is the function of controlling the acquisition, analysis, storage, retrieval and distribution of data. Data management can involve protecting the physical security of data, ensuring back up and recovery procedures are in place, protecting confidential or private information in data, reducing redundancy in data, and establishing an enterprise data architecture.

Enterprise Guiding Principles

1. Promote a "holistic" or "whole government" approach while respecting the unique Federal, State and Local Units of Government roles, legislation and mandates.

2. Systems should be designed for adaptability and flexibility, so they can be responsive changes with respect to legislation, societal needs or other program modifications.

3. To ensure fiscal responsibility with respect to information technology (IT), the State of Wisconsin will adopt a formal investment strategy with respect to IT acquisitions.

4. Agencies will converge towards the EA over time, as new applications are built and deployed and old systems refreshed or retired.

Management and Organization Principles

1. The management and governance of the EA will be open and transparent to all stakeholders.

2. Promote formal methods of IT systems engineering.

3. Promote "technology equalization" among stakeholders, as not all Agencies are funded at the same level. Often when dire societal situations arise, there is no new funding available to develop IT solutions that will provide significant automation benefits to affected program areas.

4. Promote organizational diversity and virtual organizations, such as "Centers of Excellence".

5. To promote adoption of the EA, those providing services (applications or infrastructure) will need to be responsive to stakeholders' business needs.

6. To ensure the adoption of the EA, training programs and consulting services will need to be developed and provided to stakeholders.

7. Encourage professional development for Full-Time Equivalent (FTE) staff with respect to the use of the EA.

8. The EA will establish accountability for all IT assets – applications, data and technologies.

9. Promote contract management best practices.

Technology Principles

1. EA technology choices will be based on extensible, interoperable, flexible, adaptable and scalable criteria.

2. Promote reduced complexity and enable integration to the maximum extent possible.

3. Support pervasive standards and technologies.

4. Incorporate standards that effectuate "open systems" and seamless integration and establish an enterprise-wide perspective.

5. Identify opportunities for cross-functional systems and will implement systems in such a way that we can promote technology re-use.

Application Delivery Principles

1. To the extent possible, the integration of the infrastructure must enable the provision of State of Wisconsin information and services to citizens, businesses, and other governments (i.e. federal, municipal and international).

2. Support appropriate client delivery channel preferences in accessing government services, including both electronic channels and more "traditional" channels.

User Interface Principle

To be responsive to the increasing diversity of Wisconsin society, the State of Wisconsin must be accessible to all citizens.

Security Principle

IT systems must be implemented in adherence with government security, confidentiality and privacy policies and laws. Information must be protected against unauthorized access, denial of service, and both intentional and accidental modification.

System Management Principles
1. IT must plan, design, and construct for growth and expansion of services (known requirements) across government.

2. Implemented infrastructure must be robust, responsive, and reliable with appropriate redundancy to protect against system failure.

Data Management Principle
1. All information must have defined "authoritative sources." These sources will act as information stewards. Authorised data must be accessible and available for re-use by any entitled systems and/or business process.

2. The State of Wisconsin's information systems should be freely available, accessible and interoperable to all levels of government within the State and to Federal agencies.